

Autonomous Cryogenic Loading Operations (ACLO) Project

Game Changing Development Program | Space Technology Mission
Directorate (STMD)



ANTICIPATED BENEFITS

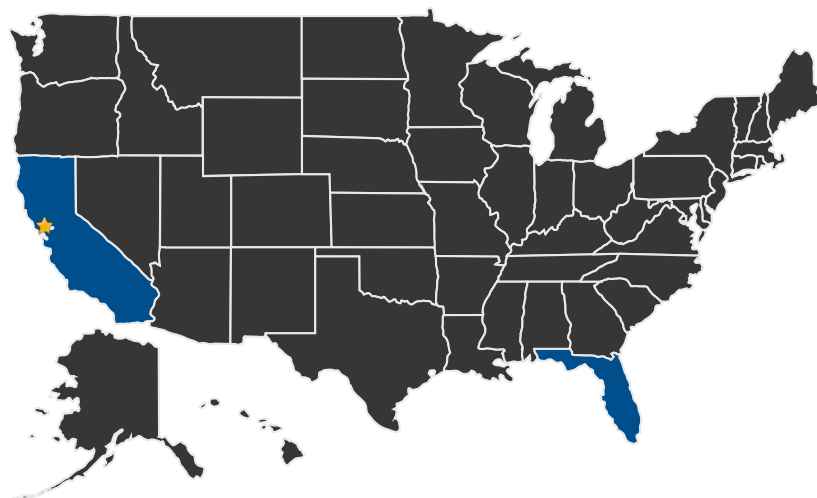
To NASA funded missions:

ACLO enables autonomous operation of cryogenic systems through development of physics-based software models and simulations that assist engineers and operators with designing cryogenic systems, optimizing propellant loading regimes, and supervising control and recovery functions.

DETAILED DESCRIPTION

Autonomous Systems (TA4) are needed to enable deep space habitats to operate in distant destinations (TA7), and to reduce the cost of cryogenic loading (TA13)

U.S. WORK LOCATIONS AND KEY PARTNERS



■ U.S. States
With Work

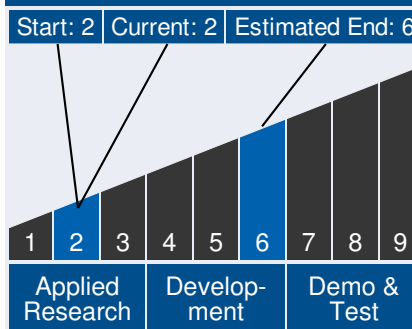
★ **Lead Center:**
Ames Research Center



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Technology Maturity



Management Team

Program Executive:

- Lanetra Tate

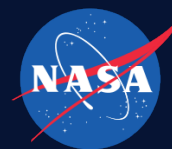
Program Manager:

- Mary Wusk

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Other Organizations Performing Work:

- ABACUS / ITSS
- Stinger Ghaffarian Technologies

Management Team *(cont.)*

Project Manager:

- Anupa Bajwa

Technology Areas

Primary Technology Area:

Ground and Launch Systems (TA 13)

- └ Reliability and Maintainability (TA 13.3)
 - └ Fault Isolation and Diagnostics (TA 13.3.4)
 - └ Embedded Fault Detection, Isolation, and Diagnosis (TA 13.3.4.1)

Secondary Technology Area:

Ground and Launch Systems (TA 13)

- └ Operational Life-Cycle (TA 13.1)
 - └ Autonomous Command and Control for Integrated Vehicle and Ground Systems (TA 13.1.3)

DETAILS FOR TECHNOLOGY 1
